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A North American Phlebopenes (Hymenoptera, Eupelmidae)

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The genus *Phlebopenes* Perty has heretofore been considered to consist only of species occurring in South and Central America. Fourteen species and one variety have been described. All but one of these were described from Brazil, British Guiana, Venezuela, or Colombia; the remaining species was from Nicaragua. These species were revised in 1920 by Roman (*Archiv för Zoologi,* vol. 12, pt. 19, p. 24–30), and he gives a key to the species.

For nearly 50 years, however, there have been specimens of an undescribed *Phlebopenes* from Florida and Georgia in the U. S. National Museum collection. Just this year I received two more Florida specimens and a Maryland specimen of this species for identification, so it seems advisable to name it. This new species will greatly extend the range for the genus, and add another generic name to the North American catalog.

The species of *Phlebopenes* are very large indeed for chalcidoids; Roman (*loc. cit.*) remarked that *Phlebopenes* with its relatives is like an elephant among rabbits! Much of this apparent large size is due to the ovipositor being exserted and very long, always longer than the body, and often several times as long as the body. Even without this elongate ovipositor, however, the body in *Phlebopenes* is quite large for a chalcidoid, although surpassed by some brachymerine chalcidids.

Unfortunately nothing is known about the host relationships in *Phlebopenes*. A safe guess would be that they might parasitize woodboring larvae of Coleoptera, since specimens have been taken on standing tree trunks.

Phlebopenes hetricki, new species. (Fig. 1)

In Roman's key, this species will run out at couplet 7, which contains two South American species, *longicaudata* (Westwood) and *consors* (Walker). It differs from the first in having the ovipositor sheaths only 1½ times as long as the body, rather than 4 or 5 times as long as the body. It differs from *consors* by possessing a median, longitudinal, dorsal carina on the mesoscutum. The species *longifica* (Walker), *viridis* (Westwood), *consors* (Walker), *pilipes* Cameron, *abdominalis* Ashmead, and *pertyi* Ashmead are represented in the U.S.N.M. collection, and *hetricki* differs from all of them in having this longitudinal carina on the mesoscutum, in having a median, longitudinal groove on the scutellum, in having the path of the obsolete vein *M* + *Cu* of the forewing bare, and in having the propodeum extremely short on the meson. *P. hetricki* differs in details of its color pattern from the descriptions of the species that are not represented in the U.S.N.M. collection.

Female.—Length, head and body, 8.0–8.5 mm, ovipositor, 12–13 mm. Head and thorax dark metallic purple with iridescent blue-green highlights; gaster with dark, iridescent blue-green to purple shading at base above, apical segments purple, and intermediate segments tan to red-brown; antennal scape tan at base, distally black with iridescent blue-green sheen; pedicel and flagellum black; coxae iridescent purple, apices tan; femora, tibiae, and tarsi tan; wings clear hyaline, veins tan to dark brown; ovipositor sheaths black.

Head densely clothed with short, silvery hair, face and parascrobal areas with umbilicate punctation; scrobes vaguely indicated, not impressed, surface faintly sculptured, almost smooth; scape broadened and flattened mesally, apex greatly surpassing level of vertex; pedicel and ring segment subequal in length, the latter ¼ as long as first funicular segment; F-1 and F-2 equal in

length, F-3 $\frac{7}{8}$ as long as F-2, F-4 $\frac{5}{8}$ as long as F-2, F-5 $\frac{1}{2}$ as long as F-2, F-6 and 7 subequal in length, each not quite $\frac{3}{8}$ as long as F-2; club $\frac{1}{2}$ as long as F-2, club segments oblique, appendiculate segment at apex of club clearly visible.

Fig. 1. *Phlebopenes hetricki,* lateral aspect.

Mesothorax, except for mesepimeron, closely covered with punctures and short, silvery hair, mesepimeron minutely roughened and lacking pubescence; a distinct median, longitudinal carina extending from apex of praescutum almost to base of scutellum; a median, longitudinal groove present in basal $\frac{2}{3}$ of

scutellum. Prepectus wedge-shaped. Metepisternum and hind coxae densely covered with relatively long, silvery hair, this pubescence extending onto propodeum in area around spiracles. Forewing with marginal vein $\frac{3}{8}$, and postmarginal vein $\frac{1}{2}$, as long as submarginal vein, stigmal vein $\frac{1}{3}$ as long as marginal; area immediately behind submarginal vein with relatively sparse setae, basal cell otherwise glabrous, no setae present on path of obsolete vein $M + Cu$. Basal $\frac{1}{2}$ of ventral margin of hind femur carinate; basal hind tarsal segment twice as long as second segment.

Propodeum short on meson, only $\frac{1}{6}$ the length of the scutellum, median propodeal area with 1 or 2 fine, transverse carinulae, surface otherwise smooth; propodeal spiracle oval, large, length $1\frac{1}{4}$ times median length of propodeum. Second abdominal tergum minute, hardly visible, its length $\frac{1}{2}$ that of propodeum at meson. First gastral tergum (A–III) with a deep median incision in posterior margin, surface of tergum smooth, fine pubescence present laterally; tergum 2 with a slightly less deep median incision, surface faintly and minutely sculptured, fine pubescence present laterally; tergum 3 with sculpture and posterior incision same as on tergum 2, fine pubescence present anteriorly and laterally; tergum 4 with a shallow median incision, surface slightly more intensely sculptured, fine pubescence in anterior and lateral areas; tergum 5 with posterior margin entire, surface sculpture stronger than on tergum 4, fine pubescence anterior and lateral; tergum 6 with sculpture slightly coarser than on 5, entire tergum with fine pubescence, spiracles normally concealed beneath projecting margin of tergum 5; tergum 7 with dense, bristly pubescence over entire surface, cerci sessile, ventral, each cercus bearing 2 long and 2 short bristles. Ovipositor sheaths closely clothed with stout, minute bristles.

Male.—Unknown.

Type locality.—Olustee, Florida.

Type.—U.S.N.M. No. 64991.

Described from 6 female specimens, as follows: *Type,* Olustee, Florida, June 27, 1963, collected on trunk of living longleaf pine

tree, L. A. Hetrick; *paratypes,* 1 ♀, Pensacola, Florida, June 18, 1963, in Japanese beetle trap, T. W. Boyd; 1 ♀, Miami, Florida, April 12, J. N. Knull; 1 ♀, Paradise Key, Florida, C. A. Mosier; 1 ♀, Georgia [no further data]; 1 ♀, Hays Beach, Maryland, July 4, 1949, collected on standing pine tree, H. F. Howden. One paratype is deposited in the Canadian Department of Agriculture, Entomology Research Institute, Ottawa; 1 paratype is in the Florida State Plant Board, Gainesville; the other specimens are in the U. S. National Museum.

Description of the Male of Dialictus novascotiae Mitchell and of the Female of D. sandhouseae (Michener) (Hymenoptera, Halictidae) [1]

G. Knerer and C. E. Atwood [2]

During recent studies on the distribution of halictid and andrenid bees of Ontario, large numbers of small, metallic bees belonging to the genus *Dialictus* Robertson were captured by the authors. The occurrence of both males and females at the same time and place allowed the association of the dimorph sexes in several cases. During the determination of part of the material by Dr. T. B. Mitchell of North Carolina State University, two species were found to have been described from one sex only. The description of the previously unknown sexes is given below.

Dialictus novascotiae Mitchell. Fig. 1.

Dialictus novascotiae Mitchell, 1960. N. C. Agr. Exp. Sta. Tech. Bull. 141 : 407. ♀.

Male.—Length 5.5–7.0 mm; wing length 4–5 mm; *head* and *thorax* dark bluish green, *abdomen* piceous; pubescence yellowish-white, rather thin, more copious on head, becoming sub-

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